

REISSUE PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent Applicant: Shimek et al. Patent No. 5,941,237
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Assignee: Hearth Technologies Inc. Reissue Docket No.: 12929.1033USRE
Reissue Filed: August 23, 2001
Title: UNIVERSAL NON-POROUS FIBER REINFORCED COMBUSTION
CHAMBER FIREPLACE

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By: 
Name: Omesh Singh

PRELIMINARY AMENDMENT

BOX REISSUE

Assistant Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

Prior to examination, please amend the above-identified patent application as follows:

In the Claims

Please add the following new claims 19-55:

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19. (New) A universal open box combustion chamber for use in a plurality of different types of fireplaces comprising:

a floor panel;

a top panel;

two side panels;

said floor panel, said top panel and said side panels each comprising a mixture of refractory ceramic fibers and an aqueous solution of binder formed and dried after molding to provide a gas tight and impact resistant box of panels of a fireplace combustion chamber;

glass door means attached to said panels to provide a gas tight closed box fireplace; and

burner means supported by the floor panel.

20. (New) An open box combustion chamber for use in a plurality of different types of gas fireplaces, comprising:

a one piece fireplace combustion chamber comprising a mixture of refractory ceramic fibers and a binder, wherein the one piece fireplace combustion chamber comprises a floor panel;
and

a burner positioned relative to the floor panel to provide a flame within the combustion chamber.

21. (New) The combustion chamber of claim 20, further comprising a front panel coupled to the one piece fireplace combustion chamber.

22. (New) The combustion chamber of claim 20, wherein the burner is a flat pan burner.

23. (New) The combustion chamber of claim 22, wherein the flat pan burner is generally a U-shaped pan.

24. (New) The combustion chamber of claim 20, wherein the burner comprises a portion of the floor panel.

25. (New) The combustion chamber of claim 20, wherein the burner comprises:

a panel having a top surface and a bottom surface, wherein the panel comprises a mixture of refractory ceramic fibers and a binder, and wherein the panel defines at least one aperture to provide combustible gas to the top surface of the panel; and

a bottom portion coupled to the panel, wherein the bottom portion provides fluid communication of combustible gas to the at least one aperture.

26. (New) The combustion chamber of claim 25, wherein the bottom portion comprises a mixture of refractory ceramic fibers and a binder.

27. (New) The gas burner of claim 25, wherein the bottom portion comprises a metal pan.

28. (New) The gas burner of claim 25, wherein the bottom portion and a portion of the bottom surface of the panel define an area, wherein the area provides the fluid communication of combustible gas to the at least one aperture.

29. (New) A combustion chamber for use in a plurality of different types of fireplaces, comprising:

a floor panel;

a top panel;

a side panel;

wherein the floor panel, the top panel and the side panel are molded to form a one piece fireplace combustion chamber; and

wherein the one piece fireplace combustion chamber comprises a mixture of refractory ceramic fibers and a binder.

30. (New) The combustion chamber of claim 29, further comprising a burner positioned to provide a flame within the one piece fireplace combustion chamber.

31. (New) The combustion chamber of claim 29, further comprising a burner, wherein the burner comprises a portion of the floor panel.

32. (New) A combustion chamber for use in a plurality of different types of fireplaces, comprising:
a floor panel;
wherein the floor panel comprises a mixture of refractory ceramic fibers and a binder;
and
a burner positioned relative to the floor panel to provide a flame within the combustion chamber.
33. (New) The combustion chamber of claim 32, wherein the burner is a flat pan burner.
34. (New) The combustion chamber of claim 33, wherein the flat pan burner is generally a U-shaped pan.
35. (New) The combustion chamber of claim 32, wherein the burner comprises a portion of the floor panel.
36. (New) The combustion chamber of claim 32, wherein the burner comprises:
a panel having a top surface and a bottom surface, wherein the panel comprises a mixture of refractory ceramic fibers and a binder, and wherein the panel defines at least one aperture to provide combustible gas to the top surface of the panel; and
a bottom portion coupled to the panel, wherein the bottom portion provides fluid communication of combustible gas to the at least one aperture.
37. (New) The combustion chamber of claim 32, wherein the bottom portion comprises a mixture of refractory ceramic fibers and a binder.
38. (New) The combustion chamber of claim 32, wherein the bottom portion comprises a metal pan.
39. (New) The combustion chamber of claim 38, wherein the metal pan is generally a U-shaped pan.

40. (New) The combustion chamber of claim 32, wherein the bottom portion and a portion of the bottom surface of the panel define an area, wherein the area provides the fluid communication of combustible gas to the at least one aperture.
41. (New) A bottom panel for use in a plurality of different types of fireplaces, comprising: a floor panel having a top surface and a bottom surface, wherein the floor panel comprises a mixture of refractory ceramic fibers and a binder, and wherein the floor panel defines at least one aperture to provide combustible gas to the top surface of the floor panel; and a bottom portion coupled to the floor panel, wherein the bottom portion provides fluid communication of combustible gas to the at least one aperture.
42. (New) The bottom panel of claim 41, wherein the bottom portion comprises a mixture of refractory ceramic fibers and a binder.
43. (New) The bottom panel of claim 41, wherein the bottom portion comprises a metal pan.
44. (New) The bottom panel of claim 43, wherein the metal pan is generally a U-shaped pan.
45. (New) The bottom panel of claim 41, wherein the bottom portion and a portion of the bottom surface of the panel define an area, wherein the area provides the fluid communication of combustible gas to the at least one aperture.
46. (New) A gas burner for a fireplace, comprising: a panel having a top surface and a bottom surface, wherein the panel comprises a mixture of refractory ceramic fibers and a binder, and wherein the panel defines at least one aperture to provide combustible gas to the top surface of the panel; and a bottom portion coupled to the panel, wherein the bottom portion provides fluid communication of combustible gas to the at least one aperture.

47. (New) The gas burner of claim 46, wherein the bottom portion comprises a mixture of refractory ceramic fibers and a binder.
48. (New) The gas burner of claim 46, wherein the bottom portion comprises a metal pan.
49. (New) The combustion chamber of claim 48, wherein the metal pan is generally a U-shaped pan.
50. (New) The gas burner of claim 46, wherein the bottom portion and a portion of the bottom surface of the panel define an area, wherein the area provides the fluid communication of combustible gas to the at least one aperture.
51. (New) The gas burner of claim 46, wherein the panel comprises a portion of a floor panel of a fireplace combustion chamber.
52. (New) A method of making a combustion chamber for use as a component of a fireplace unit, comprising the steps of:
mixing refractory ceramic fibers with an aqueous solution of binder to form a castable slurry;
forming the castable slurry on a forming mold to build up a desired predetermined thickness non-rigid fireplace combustion chamber having a floor for supporting a gas burner;
drying said formed combustion chamber on the mold to provide an uncured one piece combustion chamber;
stripping away the forming mold; and
heating said uncured one piece combustion chamber at firing temperature to form a rigid combustion chamber ready for assembly.
53. (New) A method of making a floor panel for use in a plurality of different types of fireplaces, comprising the steps of:
mixing refractory ceramic fibers with an aqueous solution of binder to form a castable slurry;

molding the castable slurry on a mold to form a non-rigid floor panel;
drying the non-rigid floor panel on the mold to provide an uncured floor panel;
removing the uncured floor panel from the mold;
curing the uncured floor panel to form a rigid floor panel;
providing at least one aperture in the rigid floor panel to provide combustible gas to the top surface; and
coupling a bottom portion to the rigid floor panel, wherein the bottom portion provides fluid communication of combustible gas to the at least one aperture.

54. (New) The method of claim 53, further comprising the step of providing at least one aperture in the rigid floor panel to provide fluid communication of combustible gas.

55. (New) A method of making a gas burner for a fireplace, comprising the steps of:
mixing refractory ceramic fibers with an aqueous solution of binder to form a castable slurry;
molding the castable slurry on a mold to form a non-rigid panel;
drying the non-rigid floor panel on the mold to provide an uncured panel;
removing the uncured panel from the mold;
curing the uncured panel to form a rigid panel having a top surface and a bottom surface;
providing at least one aperture in the rigid panel to provide combustible gas to the top surface; and
coupling a bottom portion to the rigid panel, wherein the bottom portion provides fluid communication of combustible gas to the at least one aperture.

REMARKS

Claims 1-55 are pending in this application. Entry of this preliminary amendment is respectfully solicited prior to taking up the case for examination.

Support in the disclosure for newly added claims 19-55 is found within, but not limited to, the following portions of the original patent:

Claim 19: Claim 8 from original patent with "vitreous alumina silicate" deleted and "refractory ceramic fiber" added; Col. 2, lines 12-20; Col. 7, lines 57-63.

Claim 20: Col. 2, lines 12-20; Col. 3, lines 24-31; Col. 4, lines 48-56; Col. 5, lines 42-47; Col. 5, lines 57-62; Col. 6, lines 11-43; Figs. 11, 15-18, and 21; Abstract.

Claim 21: Col. 3, lines 33-37.

Claim 22: Col. 3, lines 24-31; Fig. 1, 3, 9, 10 and 15.

Claim 23: Col. 3, lines 24-31; Fig. 1, 3, 9, 10 and 15.

Claim 24: Col. 6, lines 15-43; Figs. 16-18.

Claim 25: Col. 6, lines 15-43; Figs. 16-18.

Claim 26: Col. 6, lines 15-27.

Claim 27: Col. 6, lines 36-43.

Claim 28: Col. 6, lines 28-35; Fig. 17.

Claim 29: Col. 2, lines 12-20; Col. 5, lines 42-52; Col. 5, lines 57-62; Abstract.

Claim 30: Col. 3, lines 24-31; Col. 4, lines 48-56; Col. 6, lines 11-43; Figs. 1, 3, 9, 10 and 15-18.

Claim 31: Col. 6, lines 15-43; Figs. 16-18.

Claim 32: Col. 2, lines 12-20; Col. 3, lines 24-31; Col. 6, lines 11-43; Figs. 15-18.

Claim 33: Col. 3, lines 24-31; Fig. 1, 3, 9, 10 and 15.

Claim 34: Col. 3, lines 24-31; Fig. 1, 3, 9, 10 and 15.

Claim 35: Col. 6, lines 15-43; Figs. 16-18.

Claim 36: Col. 6, lines 15-43; Figs. 16-18.

Claim 37: Col. 6, lines 15-27.

Claim 38: Col. 6, lines 36-43.

Claim 39: Fig. 18.

Claim 40: Col. 6, lines 28-35; Fig. 17.

Claim 41: Col. 2, lines 12-20; Col. 3, lines 24-31; Col. 6, lines 15-43; Figs. 16-18.

Claim 42: Col. 6, lines 15-27.

Claim 43: Col. 6, lines 36-43.

Claim 44: Fig. 18.

Claim 45: Col. 6, lines 28-35; Fig. 17.

Claim 46: Col. 6, lines 15-43; Figs. 16-18.

Claim 47: Col. 6, lines 15-27.

Claim 48: Col. 6, lines 36-43.

Claim 49: Fig. 18.

Claim 50: Col. 6, lines 28-35; Fig. 17.

Claim 51: Col. 6, lines 15-43; Figs. 16-18.

Claim 52: Col. 6, line 55 to Col. 7, line 43; Figure 21.

Claim 53: Col. 6, line 55 to Col. 7, line 43; Figure 21.

Claim 54: Col. 6, line 55 to Col. 7, line 43; Figure 21.

Claim 55: Col. 6, line 55 to Col. 7, line 43; Figure 21.

The above listing of disclosure support for the newly added claim is not meant to be limiting. No new matter has been introduced. If there are any questions regarding this case, the Examiner is invited to direct questions to the Applicants' representative by telephone at the number indicated below.

Respectfully submitted,
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